

VENEREAL DISEASE EDUCATION: A COMPARISON OF PROGRAMED AND CONVENTIONAL INSTRUCTION

L. H. GLASS, DR. P. H. AND CHARLES E. CAMPBELL, M. A.

The rising incidence of venereal disease observed during the last several years has resulted in an increased demand for educational institutions to provide a strong attack upon the problem. Much of the demand is based upon the observation that a disproportionate rise in venereal disease is taking place among teenagers and young adults.

Over the years, interest and involvement of teachers and school administrators in an organized educational program aimed at venereal disease has been sporadic. A major factor for this infrequent involvement has been and still is the inadequate preparation of the classroom teacher in techniques of presenting venereal disease instruction. School administrators, fearful of community criticism, have been even more apprehensive about venereal disease instruction than teachers. In addition to their concern about a "controversial subject," many are aware that lack of some uniformity in classroom presentations might open the doors of criticism even further.

What has been needed, then, is a vehicle of venereal disease instruction that would meet these specific needs of the teacher and administrator. In addition, the vehicle must be practical in that it should contain as much resource material under one cover as possible. If a subject area forces a teacher to gather an unusual amount of material, in most cases, the subject will be neglected. After all, the teacher has to present many areas of instruction.

A review of current secondary health books reveals that few deal adequately with the subject of venereal disease. In an attempt to overcome this problem, materials were developed by Schwartz, containing practically all the reference and resource materials a teacher would need in order to do an adequate job of venereal disease education. The materials were organized in accordance with the principles of programed learning. Information was organized in such a manner that the student could proceed and learn at his own rate.

In view of obstacles to venereal disease education as previously outlined, one might speculate that the technique of programed learning might be of value. However, the concept of such an approach is relatively new, and it is therefore necessary to evaluate the applications and limitations of this technique. Specifically, it is necessary to determine if programed instruction results in better learning and retention than a non-programed approach in the classroom situation.

Previous attempts to investigate learning and retention as applied to programed learning and venereal disease education have been limited. Schwartz attempted to validate his material by testing 283 eighth grade students from five different states. In each of the situations involved, the teacher and classroom environment was different. In addition, no attempt was made to evaluate additional variables that might influence scores measuring learning and retention.

*Dr. Glass is an Associate Professor of Health Science, San Fernando Valley State College, Northridge, California. Mr. Campbell is a Health Instructor, Burbank High School, Burbank, California.

In this study, all students used were in the tenth grade at Burbank High School, Burbank, California. They were enrolled in three different sections of a college preparatory health and safety course taught by the same teacher. Students were not chosen for this study prior to registration in their respective sections. None of the students had received venereal disease instruction of any kind at the junior high school level.

It was determined that each of these health and safety sections would be presented a different type of venereal disease instruction. One group was exposed to programed learning only, receiving a minimum of instruction from the teacher; another group was exposed to the conventional non-programed approach, with no opportunity to see the programed material; the third group was exposed to both types of presentation.

Each group was given a pretest to determine their level of knowledge prior to instruction. The test was administered approximately five weeks before the presentation of the venereal disease education unit. A post test was administered to each group when the unit of instruction was completed. Eight weeks later, all three groups were given a third test in an attempt to measure retention. The students in the three groups were told that they were involved in a study. The purpose of the announcement was to reduce concern if students heard that other classes were receiving instruction in a manner different from that which was presented to them.

During the early weeks of the semester, efforts were made to choose which class would receive the different types of instruction. Henmon-Nelson I.Q. tests were used to make this determination. It was decided that the class which received the programed approach be matched, as closely as possible, by I.Q. with the class receiving the conventional approach. Group #1, having a Henmon-Nelson I.Q. mean of 108.76 was designated to receive the programed approach. Group #2, having a Henmon-Nelson mean of 108.06, was designated for the conventional approach. Group #3, with a Henmon-Nelson I.Q. mean of 111.6 received the combined presentation.

Each student in Group #1 was issued a copy of the programed learning manual and following a five minute introductory period was left on his own. The students were given two full class periods to complete the reading of the manual. They were asked to keep an accurate record of the amount of time they required to finish the reading. When they finished reading, they were given another assignment completely unrelated to venereal disease to fill the time until the two class periods were completed. On the third day, the students were given a post test.

Group #2 began a six-class hours presentation on venereal disease education. A number of visual aids were utilized, including photographs taken of some of the crippling effects of syphilis and gonorrhea. On the third day of the unit, students viewed the film, "A Quarter Million Teenagers" and at the conclusion of the unit, they viewed the film, "Dance Little Children." A post test was administered on the seventh day.

Group #3 was issued a copy of the programed learning manual and told to keep accurate record of their reading time. They were told that questions could be raised at any time, either in the classroom or privately with the teacher. After two class periods, this group received a three-class hours presentation, encompassing much of the same material pre-

sented to Group #2. They viewed the same two films in the same sequence.

Eight weeks later, all three groups were administered a test to measure retention.

The results of this study reveal the following:

1. The programed group (#1) demonstrated its initial knowledge of venereal disease with a mean score of 29.61 per cent (Table 1). None of

TABLE 1. DISTRIBUTION OF PRETEST SCORES

PER CENT	N	GROUP 1 (N=31)		GROUP 2 (N=28)		GROUP 3 (N=31)	
		PER CENT	N	PER CENT	N	PER CENT	N
60			2	7.1			
50	3	6.2	2	7.1			
40	10	32.3	8	28.6	4	12.9	
30	16	48.5	14	50.0	10	33.0	
20	24	77.0	20	77.5	15	48.5	
10	27	87.0	27	96.4	24	77.5	
MEAN		29.61 PER CENT		29.57 PER CENT		21.10 PER CENT	

the students scored better than 60 per cent on the pretest. After reading the manual, a post test was given (Table 2). The mean score was 84.6 per cent; 93.5 per cent of the students scored better than 70 per cent on the test; 77.5 per cent of the group scored better than 80 per cent on the test; 40 per cent scored better than 90 per cent on the test. The retention test was given after eight weeks (Table 3). The mean score was 69.57 per cent; 89 per cent of the group scored better than 60 per cent on the test; 50 per cent scored better than 70 per cent on the test; 21 per cent did better than 80 per cent on the test.

As a measure of retention, there was a mean decrease of 15.1 points or 18 per cent in the scores between the post test and the retention test.

2. The conventional group (#2) demonstrated its initial knowledge of venereal disease with a mean score of 29.57 (Table 1). None of the students scored better than 70 per cent on the pretest. After the six-class hours instructional unit, a post test was administered (Table 1). The

TABLE 2. DISTRIBUTION OF POST TEST SCORES

PER CENT	N	GROUP 1 (N=31)		GROUP 2 (N=24)		GROUP 3 (N=31)	
		PER CENT	N	PER CENT	N	PER CENT	N
90 and above	12	40.0	1	3.4	11	38.4	
80	24	77.5	15	51.6	27	87.0	
70	29	93.5	25	86.0	30	97.0	
MEAN		84.64 PER CENT		78.41 PER CENT		86.38 PER CENT	

mean score was 78.41 per cent; 86 per cent of the group scored better than 70 per cent; 51.6 per cent scored better than 80 per cent and 3.4 per cent of the group did better than 90 per cent. The retention test was given after an eight week interval (Table 3). The mean score was 69.40 per cent; 96.5 per cent did better than 60 per cent; 52 per cent scored better than 70 per cent; only 7.4 per cent did better than 80 per cent.

Measuring retention, the mean decrease between the post test and the retention test was 10.6 points or 15.6 per cent.

3. The combined group (#3) demonstrated its initial knowledge of venereal disease with a mean score of 21.1 (Table 1). None of the students scored better than 50 per cent on the pretest. Following the instructional period, the post test was administered (Table 2). The mean score was 86.38 per cent; 97 per cent did better than 70 per cent; 87 per cent scored better than 90 per cent. The retention test was given after an eight week period (Table 3). The mean score was 76.51 per cent; 89 per cent of the group did better than 70 per cent; 41 per cent scored better than 80 per cent.

The mean decrease between the post test and the retention test was 9.9 points or 11.5 per cent.

TABLE 3. DISTRIBUTION OF RETENTION TEST SCORES

PER CENT	N	GROUP 1 (N=28)		GROUP 2 (N=27)		GROUP 3 (N=27)	
		PER CENT	N	PER CENT	N	PER CENT	N
90 and above	6	21.0	2	7.4	11	41.0	
80	14	50.0	14	52.0	23	89.0	
70	25	89.0	26	96.5	27	100.0	
60	28	100.0	27	100.0			
MEAN		69.57 PER CENT		69.40 PER CENT		76.51 PER CENT	

Results of the pretest indicated a low level of venereal disease information for all three groups. (Table 4).

Similar observations have been made in other studies. The results of the post-tests indicated that all three techniques utilized contributed to a significant gain in knowledge. The higher gain for the group receiving

TABLE 4. MEAN SUMMARY

GROUP	PRETEST	POST-TEST	RETENTION TEST	GAIN	PER CENT GAIN	LOSS	PER CENT LOSS
1	29.61	84.64	69.57	55.0	190	15.1	18.0
2	29.57	78.41	69.40	48.8	165	10.6	15.6
3	21.10	86.38	76.51	65.2	310	9.9	11.5

the combined approach may have been due to a variety of factors: a higher I.Q. level; a lower level of knowledge on the pretest so that they had more to gain; factors not measured.

The retention tests indicate that the combined instructional technique accounted for the lowest loss of knowledge. However, the percentage differences between the three groups was not too great. What might be more significant is that (Table 3) the combined instructional approach seems to provide retention at a higher level in that 89 per cent of the group scored 80 per cent or better on the retention test as compared to 52 per cent and 50 per cent for the programmed and conventional approaches. Consideration should also be given to the observation that the combined instructional approach required less time than the conventional teaching technique yet offered many opportunities for questions and discussion. The instructor also commented that the programmed learning manual helped provide background for students so that these discussions could take place.

Conclusions

1. The low level of knowledge indicated by the pretest further emphasizes the need for venereal disease education.
2. All three teaching techniques contributed to a gain in knowledge suggesting that any education effort will be helpful in furthering venereal disease education.
3. The mean scores determined from the retention test, while not too different for the various techniques utilized, seem to indicate that the combined approach provides more retention at a higher level.
4. Observations seem to indicate that the gain in knowledge and retention of this knowledge through the utilization of the combined approach can be obtained in less time than the conventional teaching approach.
5. This study further suggests that more investigation is indicated as a means of testing the utilization of programmed venereal disease instruction in venereal disease education.

BIBLIOGRAPHY

1. American Social Health Association. *Today's Venereal Disease Control Problem, A Joint Statement*. The Association of State and Territorial Health Officers, The American Venereal Disease Association, The American Social Health Association. New York: The American Social Health Association, March, 1964.
2. Force, Elizabeth S. "Education About Venereal Disease in the Schools," *Proceedings of the Work Forum on Syphilis and Other Treponematoses*. Public Health Service Publication No. 997. Washington: Government Printing Office, 1964. Pp. 470-472.
3. Glaser, Robert, et al. "An Evaluation of Textbooks in Terms of Learning Principles," *Teaching Machines and Programmed Learning: A Source Book*. Edited by A. A. Lumsdaine and R. Glaser. Washington: National Education Association, 1960. Pp. 437-451.
4. Hansen, Carl F. "Education About Venereal Disease in the Schools," *Proceedings of the World Forum on Syphilis and Other Treponematoses*. Public Health Service Publication No. 997. Washington: Government Printing Office, 1964. Pp. 473-477.
5. Knott, John C. "Education About Venereal Disease in the Schools," *Proceedings of the World Forum on Syphilis and Other Treponematoses*. Public Health Service Publication No. 997. Washington: Government Printing Office, 1964. Pp. 478-480.

6. Orgel, M. Norman. "Education About Venereal Disease in the Schools," *Proceedings of the World Forum on Syphilis and Other Treponematoses*. Public Health Service Publication No. 997. Washington: Government Printing Office, 1964. Pp. 481-483.
7. Schwartz, William F. "Some Pragmatic Considerations in VD Education." A paper given at Western Branch, American Public Health Association Annual Meeting, Phoenix, Arizona, May, 1963.
8. Schwartz, William F., et al. *Teacher's Handbook on Venereal Disease Education*. Unpublished manuscript, 1964.
9. Torribio, J. A. and Glass, L. H., "Venereal Disease Exhibit at Teenage Fair". *Public Health Reports*. Vol. 80, No. 1, 1965. Pp. 1-5.
10. United States Department of Health, Education, and Welfare, Public Health Service. *The Eradication of Syphilis, A Task Force Report to the Surgeon General on Syphilis Control in the United States*. Washington: Government Printing Office 1962.
11. Schramm, Wilbur. "The Research on Programmed Instruction: An Annotated Bibliography." *Stanford: Institute for Communication Research*, 1962.

* * * * *

AN EVALUATION OF THE EMOTIONAL HEALTH OF SECONDARY SCHOOL PUPILS

TRUDYS LAWRENCE, Ph.D., F.A.S.H.A.*

Modern programs of mental health are characterized by a shift in emphasis from a preoccupation with therapeutic measures to the development of preventive techniques. Probably the most forward approach to mental health has been the attempt to help the individual develop his often realized potentials. Public educators have assumed that such an approach to mental health can prove most effective when it is applied with a high degree of consistency and continuity throughout childhood and youth.

Preventive programs in the school are based on meeting emotional as well as physical needs and hold promise of enabling the pupils to meet the unfolding demands and stresses of growth, development, and maturity with confidence and a degree of efficiency and adjustment.

Identification of Emotional Health Concepts

The study here reported and in an effort to identify the critical issues of emotional health, Upton's method of analysis involving three primary logical steps was applied to wit: (1) classification of emotional health; (2) structural analysis of emotional health; and (3) operational analysis of emotional health.

In the first part of the analysis, total health was classified as the genus term with physical health and emotional health as the two species terms. Except for purposes of analysis, physical and emotional aspects of health cannot be separated since both interact in the functioning of the individual. The primary relationship between physical and emotional health may be considered as a state of physical and emotional equilibrium (or "ease"), and the malfunction of the physical and emotional equipment of an individual as a state of disease ("dis-ease").

Two main aspects of emotional health were identified in the structural analysis of emotional health: (1) emotional health as it pertains to the

*Dr. Lawrence is Supervisor of Health Education, Los Angeles City Schools.